

**REMARKS**

Applicants thank the Examiner for the very thorough consideration given the present application. Claims 1, 3, 4 and 9-22 and 24-31 are now pending in the present application. Claims 1, 13, 18 and 31 are independent. By this Amendment, claim 27 is amended and claims 29-31 are added. No new matter is involved.

Reconsideration of this application, as amended, is respectfully requested.

**Rejections Under 35 U.S.C. § 103**

**Claims 1, 3, 4, 12, 19, 20, 21 and 22**

Claims 1, 3, 4, 12, 19, 20, 21 and 22 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over (1) U.S. Patent 6,282,928 to Fukumoto et al. (“Fukumoto”) or (2) U.S. patent 2,607,209 to Constantine in view of either (1) U.S. Patent 3,012,333 to Leonard or (2) Japan '57-58092 (“Japan '092”) or Japan 54-125563 (“Japan '563”). This rejection is respectfully traversed.

During patent examination the PTO bears the initial burden of presenting a *prima facie* case of unpatentability. In re Oetiker, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444(Fed. Cir. 1992); In re Piasecki, 745 F.2d 1468, 1472, 223 USPQ 785, 788(Fed. Cir. 1984). This burden can be satisfied when the PTO presents evidence, by means of some teaching, suggestion or inference either in the applied prior art or generally available knowledge, that would have appeared to have suggested the claimed subject matter to a person of ordinary skill in the art or would have motivated a person of ordinary skill in the art to combine the applied references in the proposed manner to arrive at the claimed invention. See Carella v. Starlight Archery Pro Line Co., 804 F.2d 135, 140, 231 USPQ 644, 647 (Fed. Cir. 1986); Ashland Oil, Inc. v. Delta Resins & Refractories, Inc., 776 F.2d 281, 293,

227 USPQ 657, 664 (Fed. Cir. 1985), cert. denied, 475 U.S. 1017 (1986); In re Rinehart, 531 F.2d 1048, 1051-1052, 189 USPQ 143, 147 (CCPA 1976).

If the PTO fails to meet this burden, then the applicants are entitled to the patent. However, when a *prima facie* case is made, the burden shifts to the applicant to come forward with evidence and/or argument supporting patentability. Patentability *vel non* is then determined on the entirety of the record, by a preponderance of evidence and weight of argument, In re Ochiai, cited above.

A prior art reference anticipates the subject matter of a claim when that reference discloses every feature of the claimed invention, either explicitly or inherently. In re Schreiber, 128 F.3d 1473, 1477, 44 USPQ2d 1429, 1431 (Fed. Cir. 1997) and Hazani v. Int'l Trade Comm'n, 126 F.3d 1473, 1477, 44 USPQ2d 1358, 1361 (Fed Cir. 1997). While, of course, it is possible that it is inherent in the operation of the prior art device that a particular element operates as theorized by the examiner, inherency may not be established by probabilities or possibilities. In re Oelrich, 666 F.2d 578, 581, 212 USPQ 323, 326 (CCPA 1981) and In re Rijckaert, 9 F.3d 1531, 1534, 28 USPQ2d 1955, 1957 (Fed. Cir. 1993).

What is alleged to be inherent must necessarily occur. The mere fact that something *may* result from a given set of circumstances is not sufficient. In re Oelrich, 212 USPQ 323, 326 (CCPA 1991). “Inherent anticipation requires that the missing descriptive material is ‘necessarily present,’ not merely probably or possibly present, in the prior art.” Trintec Indus., Inc. v. Top-U.S.A. Corp., 295 F.3d 1292, 1295, 63 USPQ2d 1597, 1599 (Fed. Cir. 2002) (quoting In re Robertson, 169 F.3d 743, 745, 49 USPQ2d 1949, 1950-51 (Fed. Cir. 1999)).

Because the rejection is based on 35 U.S.C. § 103, what is in issue in such a rejection is "the invention as a whole", not just a few features of the claimed invention. Under 35 U.S.C. § 103, "[a] patent may not be obtained . . . if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains." The determination under section 103 is whether the claimed invention as a whole would have been obvious to a person of ordinary skill in the art at the time the invention was made. *See In re O'Farrell*, 853 F.2d 894, 902, 7 USPQ2d 1673, 1680 (Fed. Cir. 1988). In determining obviousness, the Examiner must explain what the differences between the claimed invention and the prior art are and provide objective factual evidence to support a conclusion that it would be obvious to one of ordinary skill in the art to achieve the claimed invention, which includes those missing features.

In the second place, in rejecting claims under 35 U.S.C. § 103, it is incumbent on the Examiner to establish a factual basis to support the legal conclusion of obviousness. *See In re Fine*, 837 F.2d 1071, 1073, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988). In so doing, the examiner is expected to make the factual determinations set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 17, 148 USPQ 459, 467 (1966), and to provide a reason why one of ordinary skill in the pertinent art would have been led to modify the prior art or to combine prior art references to arrive at the claimed invention. Such reason must stem from some teaching, suggestion or implication in the prior art as a whole or knowledge generally available to one having ordinary skill in the art. *Uniroyal Inc. v. F-Wiley Corp.*, 837 F.2d 1044, 1051, 5 USPQ2d 1434, 1438 (Fed. Cir. 1988), *cert. denied*, 488 U.S. 825 (1988);

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Ashland Oil, Inc. v. Delta Resins & Refractories, Inc., 776 F.2d 281, 293, 227 USPQ 657, 664 (Fed. Cir. 1985), cert. denied, 475 U.S. 1017 (1986); ACS Hospital Systems, Inc. v. Montefiore Hospital, 732 F.2d 1572, 1577, 221 USPQ 929, 933 (Fed. Cir. 1984). These showings by the Examiner are an essential part of complying with the burden of presenting a *prima facie* case of obviousness. Note, In re Oetiker, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992). The mere fact that the prior art may be modified in the manner suggested by the Examiner does not make the modification obvious unless the prior art suggested the desirability of the modification. In re Fritch, 972 F.2d 1260, 1266, 23 USPQ2d 1780, 1783-84 (Fed. Cir. 1992). To establish *prima facie* obviousness of a claimed invention, all the claim limitations must be suggested or taught by the prior art. In re Royka, 490 F.2d 981, 180 USPQ 580 (CCPA 1970). All words in a claim must be considered in judging the patentability of that claim against the prior art. In re Wilson, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970).

A showing of a suggestion, teaching, or motivation to combine the prior art references is an “essential evidentiary component of an obviousness holding.” C.R. Bard, Inc. v. M3 Sys. Inc., 157 F.3d 1340, 1352, 48 USPQ2d 1225, 1232 (Fed. Cir. 1998). This showing must be clear and particular, and broad conclusory statements about the teaching of multiple references, standing alone, are not “evidence.” See In re Dembiczak, 175 F.3d 994 at 1000, 50 USPQ2d 1614 at 1617 (Fed. Cir. 1999).

Moreover, it is well settled that the Office Action must provide objective evidence of the basis used in a prior art rejection. A factual inquiry whether to modify a reference must be based on

objective evidence of record, not merely conclusory statements of the Examiner. *See In re Lee*, 277 F.3d 1338, 1343, 61 USPQ2d 1430, 1433 (Fed. Cir. 2002).

Claim 1 positively recites a combination of features including (1) a water supplying duct for supplying external water to an upper part of the inside of an inner wall of the at least one circulation duct to dehumidify the air in the at least one circulation duct primarily by flowing down the inner wall from said upper part and coming in direct contact with air received in the circulation duct, and (2) wherein the one circulation duct has a plurality of grooves with helical configurations provided at an inner wall surface thereof for prolonging a heat exchange time period of the hot and humid air by reducing the flow speed of water along the inner walls of the circulation duct.

However, this combination of features is not shown in any of the five applied references, either explicitly or inherently.

**FUKUMOTO:**

The Office Action bases the rejection on Figs. 7-9 of Fukumoto (see page 2, paragraph No. 3, line 5 of the outstanding Office Action) discussing water supply duct 43 on page 2, paragraph 3, last paragraph, yet relies on characteristics of the heat exchanger 38 of Figs. 3 and 4 when it relies on col. 5, lines 5-8 and col. 7, lines 2-5 of Fukumoto (see the top few lines of page 3 of the outstanding Office Action), thereby mixing up different embodiments of Fukumoto. In this regard, heat exchanger 38 of Figs. 3 and 4 of Fukumoto works in a different manner than does heat exchanger 43 of Figs. 7-9 of Fukumoto, the former not having a water source 43 to spray water into the hot, moist air stream. Applicants respectfully submit that Figs. 7-9 of Fukumoto, on which the rejection is said to be based, relies on cooling the hot, moist air using water sprayed directly into the hot, moist air

stream and does not explicitly disclose cooling the hot moist air by flowing water down the side of the duct in any embodiment.

This rejection is improper because it inaccurately states how Fukumoto's heat exchanger 43, shown in Figs. 7-9, which are said to form the basis of the rejection, works.

Applicants respectfully submit that looking at Figs. 7-9, the relied upon figures of Fukumoto, one sees that the cooling takes place using a spray of water directly down into the rising hot, humid air. There is no discussion whatsoever in Fukumoto of cooling the hot, humid air from the laundry tub by flowing water down the inside of the hot air duct. Thus, there is no explicit disclosure of this concept, and the Office Action fails to present objective factual evidence that such disclosure is found inherently (i.e., necessarily) in Fukumoto.

The Office Action also admits that Fukumoto does not introduce water to an upper part of its circulation duct for hot, moist air.

In an attempt to remedy the failure of Fukumoto to introduce water into the upper part of the circulation duct, the Office Action turns to Leonard.

Leonard discloses a washing machine including a conduit 43 spraying water into a conduit 17, and a plurality of flanges 23 and 24, which are projected from an inner surface of the conduit 17. This configuration of Leonard has the deficiency that a part of the water supplied to the duct 5 or conduit 17 by nozzle 11 or conduit 43 can be introduced to a tub, and this deficiency makes a drying efficiency of Leonard decrease.

This differs from claim 1, which clearly recites, among other features, "a water supplying duct for supplying external water to an upper part of the inside of an inner wall of the at least one

circulation duct ... primarily by flowing down the inner wall..." and "the one circulation duct has a plurality of grooves with helical configurations provided at an inner wall surface thereof...", and thereby the water supplied to the circulation duct by the water supplying duct slowly flows down on the inner wall of the circulation duct along the helical grooves.

Applicants also respectfully submit that the outstanding Office Action fails to provide objective factual evidence that Leonard's use of plural baffle flanges 23 and 24, which involve a plurality of complicatedly shaped multi-element structure, renders the claimed invention including the recited helical groove feature obvious. The plurality of Leonard's baffle flanges 23 and 24 involve a complicated multi-element structure, whereas Applicants' claimed helical grooves have a simpler, more unitary structure, and such simple, unitary structural features are neither disclosed nor suggested by Leonard's complicated, unwieldy flanged baffle structure. Moreover, no objective factual evidence of why use of Leonard's baffles would render the claimed helical groove feature obvious has been presented.

Moreover, Applicants' claimed invention has significant structural advantages over any of the applied art, including a helically grooved body that can readily be formed as a unitary body to achieve cost savings associated with construction of the claimed invention as compared to complicated multiple element devices such as those disclosed by Leonard.

Another advantage of the claimed invention is that the water supplied to the circulation duct along the claimed helical grooves is not blown by air passing through the circulation duct and does not go into a tub, thereby providing a relatively higher drying efficiency as compared to the applied references.

The Office Action continues to attempt to remedy the deficiencies of Fukumoto by turning to either Japan ‘092 or Japan ‘563. Japan ‘092 discloses a condensing heat transfer pipe with spiral grooves used to condense liquid from vapor. However, nowhere does Japan ‘092 disclose flowing water from the upper portion of a pipe down inside helical grooves of the pipe to condense vapor inside of the pipe.

Japan ‘563 also discloses condensing liquid from a gas flowing inside of a pipe with spiral grooves, but also fails to disclose flowing water from the upper portion of a pipe down inside helical grooves of the pipe to condense vapor inside of the pipe.

Thus, none of the applied references disclose the concept of flowing water on the inside of a conduit at all, let alone with helical grooves, as recited, to condense water in hot moist air. Without such a teaching, Applicants respectfully submit that the only basis for combining these applied references is based solely on Applicants’ disclosure, which is improper to use as the basis for a rejection under 35 USC §103.

**CONSTANTINE:**

In col. 4, lines 4-20, Constantine discloses producing a water film on the inside of condenser tube 18 as it travels downward and is used to condense moisture from the moisture laden air rising in the condenser tube 18. However, Constantine has no disclosure of the circulation duct having a plurality of grooves with helical configurations provided at an inner wall surface thereof for prolonging a heat exchange time period of the hot and humid air by reducing the flow speed of water along the inner walls of the circulation duct.

Leonard does not provide such a disclosure, either. Nor do Japan '092 or Japan '563. In fact, Leonard teaches away from the claimed helical groove configuration by using a complicated plural plate scheme, and neither of Japan '092 and Japan '563 discloses flowing water down the surface of a helical tube to cool moist air. These two Japanese references merely show the use of spiral grooved heat exchange tubes, and neither of them includes a disclosure of flowing water down the inside thereof to cool moisture laden air.

Thus, none of the applied references disclose the concept of flowing water on the inside of a conduit with helical grooves to condense water in hot moist air. Without such a teaching, Applicants respectfully submit that the only basis for combining these applied references is based solely on Applicants' disclosure, which is improper to use as the basis for a rejection under 35 USC §103.

The Office Action also continues by speculating that "as for the configurations being helical grooves, the same is deemed to be of little patentable weight in that this is considered to merely be a change in shape," and cites MPEP §2411.02-IV.

It is improper to base a rejection on the broad, general principle quoted above, which is incorrect in the sense that it does not address a shape that significantly affects the operation of the device, and is not clear and particular objective factual evidence which would motivate one of ordinary skill in the art to modify Fukumoto to redesign and reconstruct Fukumoto to provide the recited shape. Relying on such a statement is inconsistent with the principles set down by "Graham v. John Deere," and "In re Lee" and "In re Dembicza," and makes this rejection fundamentally improper.

Moreover, the reliance on the stated MPEP Section provides no objective evidence of the desire of one of ordinary skill in the art to redesign the fundamental structure of Fukumoto in such a counter-intuitive manner.

Additionally, the Office Action fails to explain how this fundamental redesign of Fukumoto which deals with the operational aspects of the device of Fukumoto, relates to the facts in the case law mentioned in the cited section of the MPEP. One of the cases cited in this section of the MPEP dealing with "shape" is "In re Dailey." Two of the claims in issue in the "Dailey" case were claims 27 and 28. The court stated, in that decision that claim 27, while defining no particular nipple opening structure, recites the configuration of the top and bottom sections of the container as that of "a portion of a sphere less than a hemisphere." In claim 28, the central angle of those spherical portions is about 80°. The court further noted that one of the applied references, Matzen, discloses that the flexible portion of his container is drawn into the rigid top portion, filling the space thereof, and indicated that Appellants presented no argument which convinced the court that the particular configuration of their container is significant or is anything more than one of numerous configurations a person of ordinary skill in the art would find obvious for the purpose of providing mating surfaces in the collapsed container of Matzen, citing Graham v. John Deere Co., 383 U.S. 1, 148 USPQ 459. (In re Dailey, 149 USPQ 47 (CCPA)).

Applicants also respectfully submit that the facts in "Dailey" differ substantially from the facts in this Application, where there is no objective factual evidence presented that one of ordinary skill in the art would be properly motivated to change the shape of the prior art condensing pipe.

The Office Action even fails to provide objective factual evidence of a problem in the prior art that needs to be solved.

Furthermore, The Office Action assumes a *per se* rule that changes in shape are always obvious. As stated by the Federal Circuit in In re Ochiai, 71 F.3d 1565, 1572, 37 USPQ2d 1127, 1133 (Fed. Cir. 1995), “reliance on *per se* rules of obviousness is legally incorrect and must cease.”

Further, with respect to claims 8, 9, and 17-19, the Office Action relies on “In re Harza” for the proposition that duplication of parts is obvious.

Applicant respectfully submits that reliance on this section of the MPEP is wholly inappropriate by terms of the USPTO’s own Board of Patent Appeals and Interferences decisions. In this regard, Applicants reproduce the following statements from the Board’s decision in Ex parte Granneman, 68 USPQ2d 1219 (BPAI 2003):

The examiner argues, in reliance upon In re Harza, 274 F.2d 669, 124 USPQ 378 (CCPA 1960), that an additional reactor in Zinger’s processing chamber would be a mere duplication of parts and, therefore, would have been obvious to one of ordinary skill in the art (answer, page 6).

The court in Harza stated that the only difference between the reference’s structure for sealing concrete and that of Harza’s claim 1 was that the reference’s structure had only a single rib (i.e., arm) on each side of a web, whereas the claim required a plurality of such ribs. See Harza, 274 F.2d at 671, 124 USPQ at 380. The court stated that “[i]t is well settled that the mere duplication of parts has no patentable significance unless a new and unexpected result is produced, and we are of the opinion that such is not the case here.” *Id.*

The examiner does not compare the facts in Harza with those in the present case and explain why, based upon this comparison, the legal conclusion in the present case should be the same as that in Harza. Instead, the examiner relies upon Harza as establishing a *per se* rule that duplication of parts is obvious. As stated by the Federal Circuit in In re Ochiai, 71 F.3d 1565, 1572, 37 USPQ2d 1127, 1133 (Fed. Cir. 1995), “reliance on *per se* rules of obviousness is legally incorrect and must cease.”

[1] For a *prima facie* case of obviousness to be established, the teachings from the prior art itself must appear to have suggested the claimed subject matter to one of ordinary skill in the

art. *See In re Rinehart*, 531 F.2d 1048, 1051, 189 USPQ 143, 147 (CCPA 1976). The mere fact that the prior art could be modified as proposed by the examiner is not sufficient to establish a *prima facie* case of obviousness. *See In re Fritch*, 972 F.2d 1260, 1266, 23 USPQ2d 1780, 1783 (Fed. Cir. 1992). The examiner must explain why the prior art would have suggested to one of ordinary skill in the art the desirability of the modification. *See Fritch*, 972 F.2d at 1266, 23 USPQ2d at 1783-84.

The examiner argues that one of ordinary skill in the art would have included an additional reactor in Zinger's processing chamber to permit simultaneous heat treatment of wafers in two boats and thereby increase the production capacity of the processing chamber (answer, pages 6-7). Zinger, however, uses multiple one-reactor processing chambers rather than multiple reactors within each processing chamber (figure 1). The examiner has not explained why the Zinger reference itself would have fairly suggested, to one of ordinary skill in the art, the desirability of using multiple reactors within a processing chamber rather than using Zinger's multiple one-reactor processing chambers.

For the above reasons we conclude that the examiner has not established a *prima facie* case of obviousness of the appellants' claimed invention.1

In other words, the Examiner's reliance on the cases set forth in MPEP §2144-02 IV to establish a *prima facie* case of obviousness of the claimed invention is fundamentally improper.

Additionally, because Fukumoto fail to disclose the claimed helical grooves and flowing water feature which affects the operation of the claimed invention, and no objective evidence is shown of such a feature existing in the art, the motivation for modifying Fukumoto to provide that feature must be based on improper speculation and/or impermissible hindsight.

The Office Action also relies on MPEP §2144-02 VI, entitled, "Reversal, duplication, or rearrangement of parts," for the proposition that the location as claimed is of little patentable weight. Applicants respectfully disagree because this is nothing more than another example of reliance on an improper *per se* rule of obviousness.

Accordingly, the Office Action fails to make out a *prima facie* case of proper motivation to modify either Fukumoto or Constantine, as suggested, in view of any of the three secondary

references, to provide the claimed invention, and the claimed invention patentably defines over the applied art. Moreover, because the Office Action relies on a specific case, “In re Japikse,” Applicants will address the impropriety of reliance thereon.

Appellants respectfully disagree with this statement of what happened in the “Japikse” case. Japikse claimed a hydraulic power press. Claim 3 of Japikse allegedly read on the “Cannon” reference except for the feature, “means disposed in alignment with said opening for contact by said depending means to start the pressing operation of said hydraulic press.” The Board held that there would be no invention in shifting the starting switch disclosed by Cannon to a different position since the operation of the device would not thereby be modified. The Court found no error in that holding of the Board.

In the first place, Appellants respectfully submit that it is completely improper to base a rejection on the broad, general principle quoted above, which is not clear and particular objective factual evidence which would motivate one of ordinary skill in the art to modify Fukumoto to redesign and reconstruct Fukumoto to provide the two aforementioned admitted missing features. See in this regard, the aforementioned case law including, “In re Lee” and “In re Dembicczak.” Moreover, this approach does not address the invention as a whole, as required by the decision in the previously cited “Graham v. John Deere” case. Evidence of this is in the language found in this case, which is eschewed by subsequent case law, i.e., “there is no invention in.” That is not the standard for evaluating obviousness of an invention under the subsequently enacted 1952 Patent Act.

Relying on such a statement flies in the face of the principles set down by “Graham v. John Deere,” and “In re Lee” and “In re Dembicczak,” and makes this rejection fundamentally improper.

Moreover, the reliance on the stated holding in this pre-1952 Patent Act case provides no objective evidence of the desire of one of ordinary skill in the art to redesign the fundamental structure of Kitara.

Additionally, the Office Action fails to explain how this proposed fundamental redesign of Fukumoto or Constantine, which deals with the operational aspects of Fukumoto's or Constantine's device, relates to locating a power switch for a hydraulic press, as was the issue presented in Japikse.

The citation of a pre-1952 Patent Act case to support an obviousness rejection provides no motivation to one of ordinary skill in the art to modify Fukumoto or Constantine in any manner, let alone in the non-obvious manner suggested.

Moreover, because none of the applied references discloses or suggests the claimed invention, the motivation for modifying Fukumoto or Constantine, as suggested, must be based on speculation and/or impermissible hindsight.

Furthermore, this rejection improperly relies on the *per se* rule that that rearranging parts of an invention involves only routine skill in the art

The Office Action's position in this regard is completely at odds with established precedential case law of the Court of Appeals for the Federal Circuit. As stated by the Federal Circuit in In re Ochiai, 71 F.3d 1565, 1572, 37 USPQ2d 1127, 1133 (Fed. Cir. 1995), "reliance on *per se* rules of obviousness is legally incorrect and must cease."

Accordingly, the Office Action fails to make out a *prima facie* case of obviousness of the claimed invention.

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Therefore, reconsideration and withdrawal of this rejection of claims 1, 3, 4, 12, 19, 20, 21 and 22 are respectfully requested.

**Claims 9, 11 and 17**

Claims 9, 11 and 17 stand rejected under 35 USC §103(a) as being unpatentable over the art applied in the rejection of claim 1, and further in view of WIPO '169. This rejection is respectfully traversed.

Initially, Applicants respectfully submit that claim 1, from which claims 9, 11 and 17 depend, is not rendered obvious by the art applied in the rejection of claim 1, and WIPO '169 is not applied to remedy the deficiencies in the reference combination applied in the rejection of claim 1.

Accordingly, even if one of ordinary skill in the art were motivated to modify the aforementioned reference combination used to reject claim 1, the resulting modified version of that reference combination would neither suggest nor render obvious the claimed invention.

Reconsideration and withdrawal of this rejection of claims 9, 11 and 17 are respectfully requested.

**Claim 12**

Claim 12 stands rejected under 35 U.S.C. §103(a) as unpatentable over Constantine, as applied in the rejection of claim 1, in view of either U.S. Patent 3,248,801 to Morton or U.S. Patent 4,103,433 to Taylor. This rejection is respectfully traversed.

Presumably, even though the rejection only mentions Constantine as the base reference in this rejection, the Examiner means Constantine in view of the three alternate secondary references.

Applicants respectfully submit that the base reference combination applied in this rejection does not render the claimed invention obvious for reasons stated above, and neither of the two secondary references applied in this rejection of claim 12 is used to remedy those deficiencies.

Accordingly, even if one of ordinary skill in the art were motivated to modify the aforementioned reference combination used to reject claim 1, the resulting modified version of that reference combination would neither suggest nor render obvious the claimed invention.

The Office Action also discusses Fukumoto in the last line of the rejection. However, the rejection is based on Constantine, not Fukumoto, so this statement is not relevant to the rejection.

Accordingly, the Office Action does not make out a *prima facie* case of obviousness of the claimed invention recited in claim 12. Reconsideration and withdrawal of this rejection of claim 12 is respectfully requested.

### **Claim 10**

Claim 10 stands rejected under 35 U.S.C. §103(a) as unpatentable over the art applied in the rejection of claim 1, and further in view of either U.S. Patent 3,216,126 to Brucken et al. (“Brucken”) or U.S. Patent 3,402,576 to Krupsky. This rejection is respectfully traversed.

Claim 10, as amended, depends from claim 1, which recites a combination of features neither disclosed nor suggested by the applied art. These features include, for example, a water supplying duct for supplying external water to an upper part of the inside of an inner wall of the at least one circulation duct to dehumidify the air in the at least one circulation duct primarily by flowing down

the inner wall from said upper part and coming in direct contact with air received in the circulation duct, and wherein the one circulation duct has a plurality of grooves with helical configurations provided at an inner wall surface thereof for prolonging a heat exchange time period of the hot and humid air by reducing the flow speed of water along the inner walls of the circulation duct.

For this reason alone, this rejection of claim 10 does not make out a *prima facie* case of obviousness of the claimed invention.

Moreover, neither of the secondary references discloses a condenser type washer with air used to cool a condenser tube.

So even if one of ordinary skill in the art were properly motivated to modify the base reference combination in view of either Brucken or Krupsky, the modified version of the base reference combination would neither suggest nor render obvious the claimed invention.

The Office Action also states that these features, i.e., the claimed external air supplying duct feature and external fan feature, would be obvious to provide to Brucken as “a mere extension/duplication of the teachings of Brucken (see MPEP 2144.04 REVERSAL, DUPLICATION OR REARRANGEMENT OF PARTS).”

Applicants respectfully are in complete disagreement with this aspect of the rejection. This rejection completely fails to provide any objective factual evidence of any motivation to provide the claimed external air supplying duct and external fan features, and instead, improperly relies on a “*per se*” rule of unpatentability. As pointed out above, the Federal Circuit has stated, in *In re Ochiai*, 71 F.3d 1565, 1572, 37 USPQ2d 1127, 1133 (Fed. Cir. 1995), that “reliance on *per se* rules of obviousness is legally incorrect and must cease.”

For a *prima facie* case of obviousness to be established, the teachings from the prior art itself must appear to have suggested the claimed subject matter to one of ordinary skill in the art. *See In re Rinehart*, 531 F.2d 1048, 1051, 189 USPQ 143, 147 (CCPA 1976). The mere fact that the prior art could be modified as proposed by the Examiner is not sufficient to establish a *prima facie* case of obviousness. *See In re Fritch*, 972 F.2d 1260, 1266, 23 USPQ2d 1780, 1783 (Fed. Cir. 1992). The Examiner must explain why the prior art would have suggested to one of ordinary skill in the art the desirability of the modification. *See Fritch*, 972 F.2d at 1266, 23 USPQ2d at 1783-84.

The Office Action does not provide such an explanation, nor does it present objective factual evidence to support such a speculative conclusion.

Accordingly, the Office Action has not made out a *prima facie* case that claim 10 is obvious in view of the applied references. Reconsideration and withdrawal of this rejection of claim 10 is respectfully requested.

### **Claim 18**

Claim 18 stands rejected under 35 USC §103(a) as being unpatentable over Fukumoto in view of either U.S. Patent 578,627 (sic: 6,578,627) to Liu et al. (“Liu) or U.S. Patent 1,920,313 to Mautsch. This rejection is respectfully traversed.

Applicants respectfully submit that the Office Action fails to provide objective factual evidence that one of ordinary skill in the art would have proper motivation to modify Fukumoto to provide a single cooling fin for multiple circulation ducts passing therethrough to dehumidify air in the circulation ducts. The only evidence presented in this regard are a vortex generator patent to Liu

and a heat exchange radiator/evaporator patent to Mautsch, neither of which have been shown to be involved with the situation present in Fukumoto.

Fukumoto does not disclose a source of cool air to effectively cool a finned condensation duct. All that Fukumoto discloses is a washer-dryer with a condensation duct that is inside of a washing machine with no moving air to effectively cool the condensation duct, which has cooling means present already.

Applicants respectfully submits that one of ordinary skill in the art would not be motivated to go to the trouble and expense of adding a single heat fin to multiple condensation ducts (wherever they may be in Fukumoto), as claimed, especially when Fukumoto already has an efficient means, e.g., water, to cool its condensation duct. To say that it would be obvious to do so is mere speculation, and it is not proper to base a rejection under 35 USC §103 on speculation.

Moreover, just because it is possible to do something, does not mean that it is obvious to do so, and the citation of two widely disparate generic heat exchange references do not provide convincing evidence that one of ordinary skill in the art would me properly motivated to modify Fukumoto as suggested, especially where there is no rapidly moving air provided, e.g., by a fan, to cool the fins.

Accordingly, the office Action fails to make out a *prima facie* case of obviousness of claim 18.

Reconsideration and withdrawal of this rejection are respectfully requested.

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Claim 26 stands rejected under 35 USC §103(a) as unpatentable over the art applied in the rejection of claim 18 and further in view of Leonard or Japan ‘092 or Japan ‘563. This rejection is respectfully traversed.

Claim 18, upon which claim 26 depends, patentably defines over Fukumoto for reasons discussed above. So, even if one of ordinary skill in the art were properly motivated to modify Fukumoto-Liu/Mautsch, as suggested, the resulting modified version of Fukumoto-Liu/Mautsch would not result in, or render obvious the claimed invention.

Additionally, the Office Action fails to make out a *prima facie* case that one of ordinary skill in the art would be properly motivated to modify Fukumoto-Liu/Mautsch as suggested in view of Leonard or Japan ‘092 or Japan ‘563, for reasons presented above with respect to the traversal of the rejection of claims 1, 3, 4, 12, 19, 202, 21 and 22.

Accordingly, the office Action fails to make out a *prima facie* case of obviousness of claim 26.

Reconsideration and withdrawal of this rejection are respectfully requested.

### **New Claims 29-31**

New claims 29-31 recite a combination of features that is neither disclosed nor suggested by the applied art. For this reason and for the reasons presented above traversing the rejections of claim 1 and 18, Applicants respectfully submit that claims 29-31 patentably define over the applied art.

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**Allowed and Allowable Subject Matter**

Applicants acknowledge with appreciation the allowance of claims 13-16, 24 and 25, and the indication from allowable subject matter in claims 27 and 28. Claim 27 has not been re-written in independent form because it depends from claim 18, which is believed to be allowable for reasons stated above. Claims 28 depends from claim 27.

**Conclusion**

All the stated grounds of rejection have been properly traversed and/or rendered moot. Applicants therefore respectfully request that the Examiner reconsider all presently pending rejections and that they be withdrawn.

It is believed that a full and complete response has been made to the Office Action, and that as such, the Examiner is respectfully requested to send the application to Issue.

In the event there are any matters remaining in this application, the Examiner is invited to contact Robert J. Webster, Registration No. 46,472 at (703) 205-8076 in the Washington, D.C. area.

Applicants respectfully petition under the provisions of 37 C.F.R. § 1.136(a) and § 1.17 for a one-month(s) extension of time in which to respond to the Examiner's Office Action. The Extension of Time Fee in the amount of **\$120.00** is attached hereto.

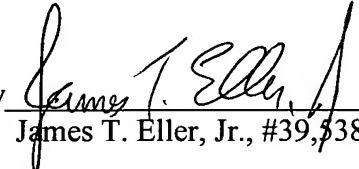
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If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

Respectfully submitted,

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By   
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